

# Notice of Allowability

Application No.

10/016,812

Examiner

Craig Curtis

Applicant(s)

ZHAO, BIN

Art Unit

2872

## -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Applicant's Amendment filed on 8 September 2004.
2. ☒ The allowed claim(s) is/are 1, 2, 7-16, 18, 20, and 21, which have been renumbered as claims 1-15.
3. ☒ The drawings filed on 30 November 2001 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All    b) ☐ Some\*    c) ☐ None    of the:
  1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).**
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

### Attachment(s)

- |   |  |
|---|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892)  | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                | 6. <input type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),<br>Paper No./Mail Date _____ | 7. <input type="checkbox"/> Examiner's Amendment/Comment                               |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material          | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance   |
|   | 9. <input type="checkbox"/> Other _____.   |

## DETAILED ACTION

### *Allowable Subject Matter*

1. **Claims 1, 2, 7-16, 18, 20, and 21 are allowed.**

### *Reasons for Allowance*

2. **The following is an examiner's statement of reasons for allowance:** The claims are allowable over the prior art for at least the reason that the prior art fails to teach or to reasonably suggest, **with respect to claims 1, 2, 7-15, 20, and 21, [a]n interleaver comprising (among other things) a spatial birefringent device, said spatial birefringent device consisting of: a polarization beam splitter; a first polarization rotator and a first reflector to control the propagation of one of said two orthogonally polarized components; a second polarization rotator and a second reflector to control the propagation of said other one of the two orthogonally polarized components; wherein said first polarization rotator, the first reflector, the second polarization rotator, the second reflector, and the polarization beam splitter are configured such that each of said two orthogonally polarized components travels along separate paths of different optical path lengths and when said two orthogonally polarized components recombine at the output of the spatial birefringent device, a phase delay between the two orthogonally polarized components is achieved; with respect to claim 16, [a] birefringent device assembly comprising (among other things) a spatial birefringent device, said spatial birefringent device consisting of elements identical to those set forth with respect to the spatial birefringent device hereinbefore with respect to claims 1, 2, 7-15, 20, and 21; and with respect to claim 18, [a] method for interleaving, said method comprising (among other steps)**

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*transmitting light through a birefringent device assembly comprised of at least one spatial birefringent device, said at least one spatial birefringent device consisting of elements identical to those set forth with respect to the spatial birefringent device hereinbefore with respect to claims 1, 2, 7-15, 20, and 21, as set forth in the claimed combination.*

3. Any comments considered necessary by Applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

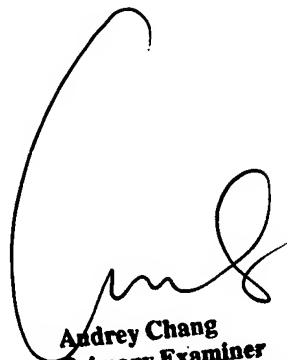
### Contact Information

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Craig H. Curtis, whose telephone number is (571) 272-2311. The examiner can normally be reached on Monday-Friday, 9:00 A.M. to 6:00 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Drew A. Dunn, can be reached at (571) 272-2311. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

C.H.C.  
Craig H. Curtis  
Group Art Unit 2872  
30 September 2004

  
Audrey Chang  
Primary Examiner  
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